H. B. THOMAS.

Grain Screen and Sieve.

No. 45,125. Patented Nov. 15, 1864.

Fig. 1.

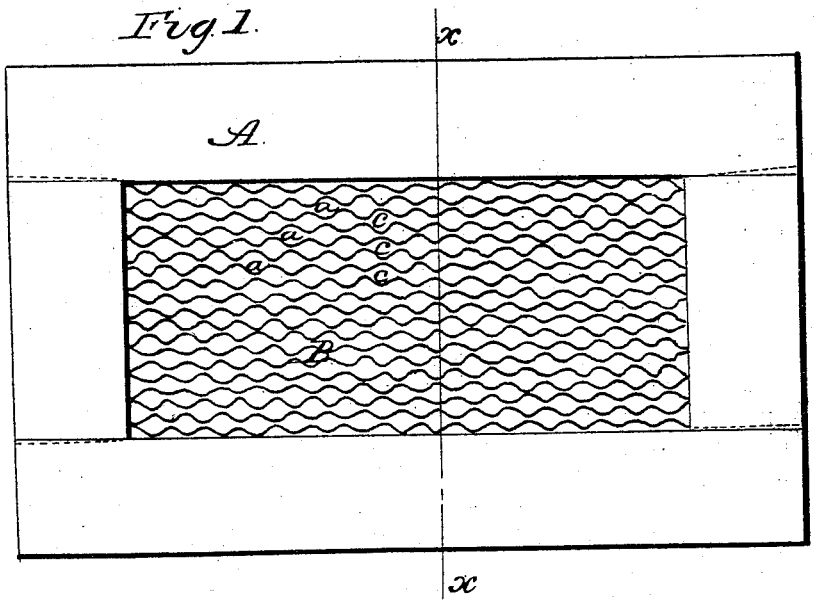

Fig. 2

Witnesses.

W. E. Mann

L. L. Coburn

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HENRY B. THOMAS, OF CHICAGO, ILLINOIS, ASSIGNOR TO HIMSELF AND S. S. MERRILL, OF SAME PLACE.

GRAIN SCREEN AND SIEVE.

Specification forming part of Letters Patent No. **45,125**, dated November 15, 1864.

To all whom it may concern:

Be it known that I, HENRY B. THOMAS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Sieves or Screens to be Used in Fanning-Mills and Grain-Separators; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings and the letters and figures marked thereon, which form part of this specification.

In said drawings, which are hereunto annexed, Figure 1 represents a plan or top view of my invention, and Fig. 2 a sectional view of the same at the line *x* in Fig. 1.

The nature of my invention consists in a novel mode of constructing sieves or screens, so as to afford a greater capacity or area of perforation than ordinary sieves possess, the interspaces or openings through the sieve being also of a cellular form, which feature is of great importance in separating grain.

To enable those skilled in the art to understand how to construct and use my invention, I will now describe the same with particularity.

A represents the frame inclosing the sieve, constructed in the usual manner by joining or mortising together four pieces of wood or other material, as shown.

B represents the sieve, which is constructed as follows: First, I take narrow strips of zinc or other suitable metal, about one-fourth of an inch in width, and bend or crimp them by any suitable means into the form shown in the drawings. Having been bent into the proper form as aforesaid, and as represented by *a a a*, the strips are arranged and adjusted with respect to each other within the frame A in the manner shown in the drawings, so as to form the openings or interspaces *c c c*. By this arrangement we obtain a sieve in which the interspacal walls are very thin, and also wherein the area of perforation is thereby very materially increased, enabling a sieve of given dimensions to perform more service than the ordinary kind of sieve. Furthermore, the interspacal divisions, being of strips arranged vertically or perpendicularly with respect to the sieve, form cellular interspaces, as shown and described.

The superiority of a sieve constructed with the cellular interspaces over one of the ordinary sieves is obvious. As the grain passes down over the screen, the wheat falls readily through the openings into its proper receptacle, while the oats, being lighter and of longer form, when being accidentally inclined downward, instead of dropping through the interspaces, as would be the case in the sieves of wire or perforated plates, hit and rest against the opposite wall of the opening, and are thus checked, while the pressure of the grain descending along the screen causes them to shift ends or be carried around and forced onward from the openings in which they had lodged, and so pass over the screen and escape from the machine at the appropriate place.

Having now described my improvement in sieves or screens, I will specify what I claim as new therein and desire to secure by Letters Patent:

In the construction of sieves or screens, the employment of the bent metallic strips *a*, when constructed, arranged, and operating as and for the purposes herein shown and described.

HENRY B. THOMAS.

Witnesses:
W. E. MAUS,
L. L. COBURN.